

CONTRIBUTIONS FROM THE GRAY HERBARIUM OF
HARVARD UNIVERSITY,—NO. LXXXII.

(Continued from page 155.)

II. THE NORTH AMERICAN SPECIES OF
ANEMONE § ANEMONANTHEA

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IN North America the species of *Anemone* § *Anemonanthea* DC. were for many years treated as identical with the Eurasian *A. nemorosa* L. or at most as an American variety, *A. nemorosa*, var. *quinquefolia* (L.) Pursh. Gradually, however, it has been recognized that we have no true *A. nemorosa* native in America, that *A. quinquefolia* L. is an endemic American species and that the members of the section on the Pacific slope are not identical with those of the Atlantic slope. All the species known in America have been properly described, but their characters have not been well worked out, and in such a current work as Piper's *Flora of the State of Washington* (1906) *A. Piperi* Britton, a plant with coarse ascending and usually forking rootstock, usually tufted flowering stems accompanied by one or more basal leaves and broad and short-beaked achenes, is reduced without comment to the eastern *A. quinquefolia*, which has slender horizontal and simple rootstock, solitary flowering stem usually without basal leaf and fusiform long-beaked achenes. Or in a later work, Jepson's *Manual of the Flowering Plants of California*, *A. quinquefolia* is made to include (as a variety) the endemic Californian *A. Grayi* Behr & Kell., a very distinct plant, differing from *A. quinquefolia* in having a thick and nodulose rootstock, with strong constrictions (in *A. quinquefolia* slender, cylindric and not nodulose), leaflets crenate and strongly pilose (in *A. quinquefolia* sharply toothed and essentially glabrous), sepals white or blue, rarely more than 1 cm. long, with the branches of the veins evanescent toward the tip (in *A. quinquefolia* the sepals white or pink, mostly 1–2.5 cm. long, with the branches of the veins extending to the margin) and achenes much smaller than in *A. quinquefolia*, with a beak about 0.5 mm. long (in *A. quinquefolia* 1–2 mm. long).

In eastern America, likewise, the group has not been satisfactorily understood. The late C. V. Piper had collected in the Virginia mountains a beautiful little plant of the section *Anemonanthea* which certainly finds no place in the two eastern species commonly recog-

nized; and the plant of the Alleghenies which was described by Pursh as *A. lancifolia*, but which all recent authors have identified with the continental European *A. trifolia* L., shows, when the series is laid beside a good display of the European plant, striking departures which seem not to have been recorded.

It seemed desirable, therefore, that our members of *Anemone* § *Anemonanthea* should be studied anew; and in the spring of 1921, having a keen student in Miss Helen Benedict (now Mrs. Frederick I. Daniels), I suggested that she attempt this study. The result was most gratifying but, unfortunately for the complete solution of the problem, the work did not reach finality, and Miss Benedict's change of plans made it out of the question for her to renew the study. She had, however, worked out many constant and hitherto undetected specific characters and prepared a clear key, and her work had definitely brought out the fact, long suspected, that the Alleghenian *A. lancifolia* is well distinguished from the European *A. trifolia*. She, furthermore, was able to identify the little plant found by Piper in the Virginia mountains with *A. minima* DC. (1817), a species apparently "lost" for almost a full century. Since Mrs. Daniels's results contain so much that is new and helpful, I have felt it important to bring them out. The main outline of the treatment is hers and only because of her modesty about presenting the results do I assume their authorship.¹ In this study Mrs. Daniels (and I) had the great advantage of examining the full series of western species in the herbarium of the State College of Washington, kindly loaned by Professor Harold St. John, a series of *A. lancifolia* generously loaned by Mr. E. B. Bartram and the material of this species in the herbarium of the Academy of Natural Sciences of Philadelphia sent by Mr. Long. These collections supplemented those of the Gray Herbarium.

¹ The great Linnaeus once issued a series of theses by his students under the title *Amoenitates Academicæ* and Presl published the results of the great collecting expeditions of Haenke as *Reliquiæ Haenkeanae*. In the pigeon-holes in my laboratory I find the partially completed revisions left by many temporary investigators. I have completed and published some of these studies and hope from time to time to bring others to conclusion and publication. It has been suggested that I call the series, in weak imitation of Linnaeus, "*Amoenitates Academicæ*"; but, in addition to the undesirable duplication of title, it must be admitted that not all such "housecleaning" work is an amenity. It would, therefore, be more appropriate, if it should ever be desirable to reprint these papers as a separate work, to borrow a cue from Presl and call the series *Reliquiæ Academicæ*!

KEY TO AMERICAN SPECIES OF ANEMONE § ANEMONANTHEA

- a.* Leaves of involucre petioled, each 3-5-foliolate: rootstock thickened: achenes fusiform, ellipsoid or ovoid, at most 2 mm. thick. . . . *b.*
- b.* Veins and veinlets of the sepals strongly anastomosing below the usually free tips¹. . . . *c.*
- c.* Rootstock subligneous, continuous, without scaly teeth: leaflets of involucral leaves deeply incised or cleft; the lateral ones often cleft nearly or quite to base: sepals commonly 6 (5-9): filaments elongating to 2 or 3 times the length of the carpels. . . . 1. *A. nemorosa.*
- c.* Rootstock fleshy, scaly-toothed: leaflets of involucral leaves not at all or only rarely and but slightly incised; lateral ones simple, merely serrate-dentate: sepals commonly 5 (4-7): filaments shorter than to less than twice as long as the carpels. . . . 2. *A. lancifolia.*
- b.* Veins and veinlets of the sepals free or only very slightly anastomosing. . . . *d.*
- d.* Flowering stems solitary from a simple horizontal rootstock. . . . *e.*
- e.* Stamens in 2 or more series, mostly 30 or more: sepals (except in poorly developed individuals) 0.6-2.5 cm. long, 3-11 mm. wide: rootstock elongate, 1-7 mm. thick. . . . *f.*
- f.* Rootstock slenderly cylindrical, 1-5 mm. thick: leaves glabrous to more or less pubescent. . . . *g.*
- g.* Middle leaflet of involucral leaves (except in weak individuals) commonly with 2-7 sharp teeth on each margin; lateral leaflets commonly cleft nearly or quite to base, with 4-12 teeth or segments on the outer margin: sepals white or roseate: filaments whitish, rarely twice as long as the carpels: beak of mature achene falcate. . . . 4. *A. quinquefolia*
- g.* Middle leaflet of involucral leaves entire or with 1-4 blunt teeth on each margin; lateral leaflets entire or but slightly cleft, with at most 7 blunt marginal teeth: sepals blue: filaments blue or bluish, becoming 2 or 3 times as long as the carpels: beak of mature achene straight. . . . 5. *A. oregana.*
- f.* Rootstock nodulose, with strong constrictions, 2-7 mm. thick: leaflets blunt, scarcely cleft, with numerous crenate teeth and strongly pilose surfaces. . . . 6. *A. Grayi.*
- e.* Stamens in a single series, 10-20 (rarely -30): sepals 0.35-1.6 cm. long, 1.7-6 mm. wide: rootstock short, slender, 1-4 mm. thick. . . . 7. *A. Lyallii.*
- d.* Flowering stems 1-several from the usually forking summits of an erect or ascending rootstock. . . . 8. *A. Piperi.*
- a.* Leaves of involucre sessile or subsessile, simple: rootstock filiform or flagelliform: achenes compressed-pyriform, 3-4 mm. broad. . . . 9. *A. deltoidea.*

¹ In the absence of flowering material of (3) *A. minima* it is quite impossible to say whether the veins of the sepals are anastomosing or free, and, consequently, to assign it a proper place in the key. *A. minima* is a very rare plant of the Virginia mountains, with almost filiform stems; closely pubescent foliage, the hairs of the upper leaf-surfaces pustulate at base; leaflets very small and sharply dentate-serrate; sepals described as about 8 mm. long and 4 mm. wide; and softly villous or almost lanuginous small achenes.

1. *A. NEMOROSA* L. Sp. Pl. i. 541 (1753); for fuller synonymy see Gürke in Richter, Pl. Eu. ii. 473 (1897).—A Eurasian plant, sometimes cultivated in America; rarely spreading or persisting after cultivation. The only American specimens seen are from MASSACHUSETTS: persistent and spreading about old S. P. Fowler garden, Danvers, May 20, 1903 and May 6, 1904, *J. H. Sears* (station now reported to be destroyed).

2. *A. LANCIFOLIA* Pursh. Rootstock stoutish, 2–5 mm. thick, crisp, whitish when fresh, horizontal, covered with tooth-like scales: flowering stems solitary, glabrous or nearly so, stoutish, 1.4–3.5 dm. high: radical leaves solitary, long-petioled, with 3 sessile leaflets; the 2 lateral deeply cleft: involucre toward the summit of the stem, with 3 short-petioled leaves; the 3 rhombic to narrowly ovate leaflets dentate, 2–8.7 cm. long, the lateral often deeply cleft: sepals commonly 5 (4–7), whitish, 1.3–2 cm. long, their veins numerous, freely forking, subparallel, strongly anastomosing: stamens very numerous; the filaments shorter than to less than twice the length of the carpels: achenes minutely hirsute, fusiform, 3.5–3.8 mm. long, tipped by a straight or slightly curved obliquely thick-subulate beak 1–1.5 mm. long.—Fl. Am. Sept. 386 (1814). *A. nemorosa* Torr. & Gr. Fl. N. A. i. 12 (1838), in part, not L. (1753). *A. nemorosa* or *A. trifolia* Gray, Am. Nat. vii. 422 (1873), not L. (1753). *A. trifolia* Britton, Ann. N. Y. Acad. Sci. vi. 226 (1891); Robinson in Gray, Synop. Fl. i. pt. 1: 13 (1895); Small, Fl. Se. U. S. 436 (1903); Ulbrich, Engler's Bot. Jahrb. xxxvii. 219 (1905); not L. (1753). *A. cuneifolia* Schweinitz acc. to Britton, Ann. N. Y. Acad. Sci. vi. 226 (1891), not Juss. (1804).—Damp woods and thickets of the Alleghenies, southern Pennsylvania to Georgia. Fl. April–early June.

It has required more than a full century for *Anemone lancifolia* to establish its identity as a species. As indicated in the bibliography, Torrey & Gray placed it unequivocally in the European *A. nemorosa* and in 1873, when he received material from Virginia, Asa Gray reaffirmed his conviction that it is *A. nemorosa* but suggested also that it might be *A. trifolia*, saying:

“*Anemone nemorosa*, or *trifolia*. From the Peaks of Otter, at altitude of about three thousand feet, Mr. A. H. Curtiss sends an anemone of a form new to this country (although there is some approach to it in Oregon), which may be called *A. nemorosa* with undivided leaflets or *A. trifolia* L., according to the botanists' fancy. It is fully as large as the latter, having the stem a foot high up to the leaves, and the leaflets two and one-half inches long; the deepness of the teeth of these, and a slight tendency to trilobation, should rather refer it to *A. nemorosa*, which not rarely exhibits this state in Europe. This European form, as Mr. Curtiss remarks, appears to have kept company with *Convallaria majalis*,¹ being here associated with it in one of the most

¹The idea that the native plant of the Alleghenies is identical with *Convallaria majalis* of Europe is as strongly entrenched as has been the conviction that the Alleghenian *Anemone lancifolia* is either *A. nemorosa* or *A. trifolia* of Europe. In the spring of 1921, while Mrs. Daniels was studying *Anemone*, Miss Marion E. Allen

northern stations of this plant, which in America is restricted to the Alleghenies." ¹

In 1891 Britton, without stating his reasons, identified *A. lancifolia* with *A. trifolia* of continental Europe; in 1895 Robinson, calling it *A. trifolia*, said: "The American plant does not differ by any constant or satisfactory character from the European, which is regarded as a good species"; ² and in 1905 Ulbrich affirmed the *complete identity* of the two, saying "Im atlantischen Nordamerika findet sich *A. trifolia* L. in Formen, die mit den europäischen völlig identisch! sind." ³ In the light of such positive and authoritative assertions of the identity of the Alleghenian and the European plants it might seem that further comparisons of the two would be futile. Nevertheless, the species of the Alleghenian flora are, in general, so thoroughly distinct from those of southern Europe that it would be a remarkable exception if *A. trifolia* of the region from Portugal to the Apennines and the Carpathians were to reappear in the mountains from southern Pennsylvania to Georgia. It is therefore, reassuring that, in making comparison of all characters of the two, Mrs. Daniels should have found that the European plant differs from the American in frequently having 2 flowers (in the American only 1), the stamens fewer and with filaments more than twice the length of the carpels (in the American the more numerous stamens with filaments shorter than to less than twice the length of the carpels), the sepals commonly 6 or 7 (in the American commonly 5), with the few veins faint, their branches running free to the tip (in the American the numerous veins more obvious, undertook a similar study of *Convallaria majalis*. Her study was, likewise, interrupted, chiefly through need of further material, but it became evident that the plant of the southern Alleghenies is not identical with that of Europe but that in habit it more nearly resembles the plant of eastern Asia (Japan and Manschuria). In the European plant the scape is elongate, so that the flowers are borne opposite the middles or the upper halves of the leaves. In the native plant of the Alleghenies the scape is shorter, the raceme well overtopped by the leaves. In this character the eastern Asiatic and the indigenous Alleghenian plants are similar but, judging from a small representation, the Asiatic has the leaves shorter and broader than in the American and the European. The scanty material at hand shows the anthers of the European and the Alleghenian plants much longer than in the Asiatic and overtopping the ovary; the shorter anthers of the eastern Asiatic plant barely equaling or scarcely reaching the summit of the ovary. In scanty fruit of the Alleghenian and the Japanese plants the seeds are different from each other and from the European: in *C. majalis* of Europe nearly round in outline; in the Alleghenian oblate, distinctly broader than high; in the Japanese obliquely obovoid, higher than broad. Should these characters be found constant when a fuller series can be compared, the eastern Asiatic plant would be called, apparently, *C. KEISKEI* Miquel, Ann. Mus. Bot. Lugd. Bat. iii. 148 (1867); the Alleghenian plant *C. MAJUSCULA* Greene in Fedde, Rep. Nov. Spec. v. 46 (1908).

¹ Gray, Am. Nat. vii. 422 (1873).

² Robinson, in Gray, Synop. Fl. i. pt. 1. 13 (1895).

³ Ulbrich, Engler's Bot. Jahrb. xxxvii. 219 (1905).

their branches strongly anastomosing). These characters, reinforced by those of the foliage, are certainly significant: in *A. trifolia* the middle leaflet of the involucre leaf is commonly lanceolate, broadest below the middle, ranging from one-third to one-half as broad as long, long-acuminate and with 5–17 (av. 10) sharp teeth on each margin. In *A. lancifolia* (unfortunately named) the middle leaflet is more oblong to rhombic, broadest at or slightly above the middle, one-third to three-fourths as broad as long, blunter and less acuminate and with 3–13 (av. 7) mostly appressed or rounded teeth. That the two plants are not identical should be apparent and in view of the probability that Pursh, whose type-specimen is presumably lost, had the Alleghenian plant it is here taken up as *A. lancifolia*.

3. *A. MINIMA* DC. Rootstock short, slender, horizontal, white and brittle: basal leaves with filiform petiole, rhombic-ovate leaflets 2–3 cm. long, sharply dentate above, entire and cuneate below, pilose upon both surfaces: flowering stem filiform, glabrous, or pilose above, 1–1.5 dm. high: involucre leaves 3, slender-petioled; leaflets 1–2 cm. long, pilose on both surfaces, rhombic, sharply dentate-serrate above the middle: sepals 5, white, oblong, about 8 mm. long and 4 mm. wide: achenes few, ellipsoid, 2.5–3 mm. long, softly villous or almost lanuginous; the recurving beak about 1 mm. long.—Syst. i. 206 (1817).—VIRGINIA: “Hab. in Virginia ad montes Alleghanis. *Palisot de Beauvois*”—DC. l. c.; Craig’s Creek, May 21, 1916, *C. V. Piper*.

A very neat little species, apparently highly localized, as indicated by the fact that it remained unrecognized for practically a century after its description by DeCandolle.

4. *A. QUINQUEFOLIA* L. Rootstock horizontal, comparatively slender, 1–4 mm. thick, crisp, whitish when fresh, covered with tooth-like scales: radical leaves solitary, long-petioled, with 3 or by division of the lateral leaflets seemingly 5 rhombic leaflets: flowering stem solitary, glabrous or sparsely hairy, slender, 0.5–3 dm. high, bearing 3 (rarely 2 or 4) long-petioled glabrous or nearly glabrous involucre leaves toward the summit; the 3–5 cuneate-obovate to rhombic or lanceolate leaflets acuminate, incised, 1–5 cm. long; the lateral often deeply cleft: sepals commonly 5 (4–9), whitish, ordinarily tinged outside with pink to crimson, or colored throughout, oblong to oval, 0.6–2.5 cm. long; veins simple or subsimple, nearly parallel, slightly forking above the middle, the branches free to the tip or very rarely slightly anastomosing: stamens numerous, in several series; the longer whitish filaments rarely twice as long as the carpels: anthers 0.5–0.8 mm. long: achenes densely short-hirsute, fusiform, 3.5–4.5 mm. long, tipped by a curved subulate beak 1–2 mm. long.—Sp. Pl. 541 (1753); Bart. Fl. N. A. ii. 10, t. 39, fig. 2 (1822); Britton, Ann.

N. Y. Acad. Sci. vi. 225 (1891); Robinson in Gray, Syn. Fl. N. A. i. 13, as to eastern plant (1895); Mathews, Field Bk. Am. Wild Fl. 134 (1902); House, Wild. Fl. N. Y. i. 106, t. 68A (1918). *A. nemorosa* of eastern Am. auth., not L.; Meehan, Nat. Fl. and Ferns, i. 21, t. 6 (1878). *A. pedata* Raf. Med. Rep. Hex. 2, v. 361 (1808). *A. nemorosa*, β . *quinquefolia* (L.) Pursh, Fl. Am. Sept. ii. 283 (1814); DC. Syst. Nat. i. 204 (1817). *A. nemorosa*, forma *quinquefolia* (L.) Britton, Bull. Torr. Bot. Cl. xvii. 123 (1890). *A. nemorosa*, subsp. *americana*,¹ var. γ *quinquefolia* (L.) Ulbrich, Engler's Bot. Jahrb. xxxvii. 226 (1905). *Anemonanthea quinquefolia* (L.) Nieuwl.² Am. Midl. Nat. iii. 174 (1914). *Nemorosa quinquefolia* (L.) Nieuwl. l. c. 322 (1914).—Open woods, damp thickets and clearings, Gaspé County, Quebec³ to southern Manitoba, south to Georgia, Tennessee and Iowa. Fl. April–June.

5. *A. OREGANA* Gray. Rootstock slender, 1.5–4 mm. thick, horizontal, whitish, simple: basal leaves rarely present on the flowering plant: flowering stem solitary, very slender, glabrous or nearly so: involucre leaves very thin; the middle leaflet oblanceolate to narrowly rhombic-obovate, subcuneate and entire below the middle, entire or with 1–4 coarse blunt teeth or rarely incised above, 2–8 cm. long; lateral leaflets obliquely lanceolate to narrowly ovate, subentire to incised: sepals blue-purple, 1–2 cm. long; their veins mostly forking, with the branches free to the tip: stamens numerous; the longer twice or thrice the length of the carpels; the filaments pink or bluish: achenes lance-fusiform, hirsute, 4–5 mm. long, with a straight oblique thick-subulate beak 1–1.5 mm. long.—Proc. Am. Acad. xxii. 308 (1897); Piper, Contrib. U. S. Nat. Herb. xi. 267 (1906); Piper & Beattie, Fl. N. W. Coast, 154 (1915). *A. cyanea* Freyn. Deutsche Bot. Monatschr. viii. 176 (1890), not Risso (1844). *A. Grayi* Britton, Ann. N. Y. Acad. Sci. vi. 226 (1891), in part, not Behr. & Kell. (1884). *A. quinquefolia*, var. *oregana* (Gray) Robinson in Gray, Syn. Fl. i. 131 (1895). *A. nemorosa*, subsp. *americana*, var. *oregana* (Gray) Ulbrich, Engler's Bot. Jahrb. xxxvii. 227 (1905).—Woods and damp thickets, Washington and Oregon, locally eastward to northeastern Idaho. Fl. April–August.

6. *A. GRAYI* Behr & Kell. Rootstock nodose, 2–7 mm. thick, horizontal, whitish when fresh: flowering stem solitary, glabrous or

¹ Ulbrich, with Germanic disregard of exact bibliography, cites "Subsp. 3 **americana** L. Spec. plant, ed. 1 (1753) p. 541 p. sp."; but Linnaeus published no *A. americana*, the only American species on p. 541 being *A. quinquefolia*.

² Nieuwland gives as the basis for this combination: "*Anemonanthea quinquefolia* Linn. l. c. Sp. Pl. p. 541"; but Linnaeus had no genus *Anemonanthea*.

³ The only basis for *A. quinquefolia* in Gaspé County, Quebec is a specimen brought back, with other characteristic plants of Grand River, by the late George H. Richards in 1903, and recorded by me at that time in a manuscript note-book. Slightly later, not then appreciating the interest of the station, I made a manuscript record of seeing the plant at Bic, Rimouski County. In view of the rarity of the plant north of the St. John valley in Maine and New Brunswick, material to serve as vouchers for its occurrence in eastern Quebec is much needed.

sparsely hairy, slender, 1–4 dm. high: radical leaves solitary, long-petioled, with 3 blunt leaflets; the lateral leaflets deeply cleft and, on the outer border, crenate nearly to base: involucre toward the summit of the stem, with 3 (rarely 2) slender-petioled leaves; the narrowly rhombic blunt leaflets crenate, strongly pilose on both surfaces, 1–3.5 cm. long; lateral leaflets scarcely cleft: sepals commonly 5 or 6, white or blue, oval, 0.7–1.3 cm. long, with the branches of the freely forking veins evanescent: stamens numerous; the longer filaments fully twice as long as the carpels: achenes densely short-hirsute except at the glabrous tip, fusiform-ellipsoid (the young 1.5 mm. long), tipped by a curved style (the young 0.6 mm. long).—Bull. Cal. Acad. i. 5 (1884); Greene, Bot. San Franc. Bay Reg. 2 (1894). *A. nemorosa*, subsp. *americana*, var. *oregana* Ulbrich, Engler's Bot. Jahrb. xxxvii. 227 (1905), in part, not *A. oregana* Gray (1887). *A. quinquefolia*, var. *Grayi* (Behr & Kell.) Jepson, Fl. W. Mid. Cal. 168 (1911).—Woods and thickets on the mountains of western California. Fl. March–June.

7. *A. LYALLII* Britton. Dwarf: rootstock horizontal, only 0.6–1.6 cm. long, 1–4 mm. thick, whitish when fresh: flowering stem solitary, glabrous or nearly so, filiform, 0.5–2.8 dm. high: radical leaves rarely on the flowering plant, long-petioled, with 3 leaflets: involucre with 3 slender-petioled leaves, the 3 narrowly obovate to elliptic-ovate leaflets crenate or incised, especially near the tip, 1–3 cm. long; the lateral leaflets scarcely cleft: sepals commonly 5, white or blue, 0.35–1.6 cm. long, 1.7–6 mm. wide, with few simply forking veins running free to the margin: stamens in a single series, 10–20 (–30); the filaments exceeding the carpels: achenes ellipsoid, plump, 4 mm. long, finely appressed-pubescent up to the base of the very short subulate beak.—Ann. N. Y. Acad. Sci. vi. 227 (1891); Piper, Contrib. U. S. Nat. Herb. xi. 267 (1906); Piper & Beattie, Fl. N. W. Coast, 153 (1915). *A. quinquefolia*, var. *Lyallii* (Britton) Robinson in Gray, Syn. Fl. N. A. i. 13 (1895). *A. nemorosa*, subsp. *americana*, var. *Lyallii* (Britton) Ulbrich, Engler's Bot. Jahrb. xxxvii. 227 (1905).—Damp woods near the coast, Vancouver Island to Siskiyou County, California, locally eastward into the Cascade Mts. Fl. April–July.

8. *A. PIPERI* Britton. Rootstock coarse, blackish (at least when dry), only slightly scaly, often forking, commonly oblique or ascending: basal leaf commonly present at flowering time: flowering stems stiffish, 1–6 from a rootstock, 1–3.5 dm. high: leaflets of the involucre 1.5–6 cm. long, usually appressed-pubescent at least when young; the middle one rhombic-obovate to -ovate, cuneate and entire below the middle, coarsely toothed and cleft above; the lateral leaflets obliquely ovate, with the rounded outer margin toothed nearly to base: sepals elliptic-ovate to oblong, white, 0.6–2 cm. long, with the branches of the mostly forking veins free to the tip: stamens very numerous; the filaments much exceeding the carpels: achenes obliquely ovoid, hirsute to the tip, 3–4 mm. long, with a straight or

barely curved beak 0.5–1 mm. long.—Britton in Rydberg, Bull. Torr. Bot. Cl. xxix. 153 (1902). *A. quinquefolia* of western Am. botanists, not L.—Woods and damp thickets, northwestern Idaho to the Cascade Mts. of Washington and the Wallowa Mts. of Oregon. Fl. April–July.

Anemone Piperi is generally passing in the Northwest as *A. quinquefolia*. It is, however, at once distinguished by its heavier and more ascending dark rootstock which is commonly forking at summit; by the strong tendency to produce two or more flowering stems; by the very frequent basal leaves at the bases of the flowering stems; by the thicker and broader, usually less cleft leaflets and by the broader achenes with much shorter beak. In its dark rootstock and its achenes *A. Piperi* suggests the Eurasian *A. nemorosa*, but that species has a simple horizontal rootstock without scales, the flowering stem solitary, the leaflets of the involucre dissected and the veins of the sepals very freely anastomosing.

The original number of *Anemone Piperi*, Piper, no. 1469, from Latah County, Idaho, seems to consist of two species. None of the specimens seen show rootstocks but the material of this number in the Gray Herbarium shows young fruit and is the plant so characteristic of northwestern Idaho above described. Sandberg, MacDougal & Heller's no. 194, also cited by Britton in the original description, is the plant above described; but Piper's material preserved at the State College of Washington has the very thin leaves and longer and more fusiform achenes of *A. oregana*.

9. *A. DELTOIDEA* Hook. Fl. Bor.-Am. i. 6 (1829); Torr. & Gray, Fl. N. A. i. 13 (1838); Britton,¹ Ann. N. Y. Acad. Sci. vi. 225 (1891); Robinson in Gray, Syn. Fl. N. A. i. 12 (1895); Ulbrich, Engler's Bot. Jahrb. xxxvii. 218 (1905).—Woods of the coast region, Washington to California.

A VARIETY OF HYPERICUM CANADENSE

C. A. WEATHERBY

HYPERICUM CANADENSE, var. **magninsulare**, n. var., petalis ovatis vel ovato-lanceolatis ad apicem obtusum vel subacutum angustatis, in anthesi mox reflexis, pallide citrinis, nervillis evidentibus et apicem

¹ Britton and, following him, Ulbrich ascribes the species *A. deltoidea* to Douglas in Hook. But examination of the original description fails to reveal the ground for treating it as Douglas's species. It was clearly published by Hooker as a new species and Douglas's only connection with it was as collector of some of the original specimens.